

REMARKS

Status of the Claims

Claims 1-24 and 26-35 are currently pending.

Independent claim 1 has been amended to recite a “method for producing multi-color concrete, comprising: (a) providing a first spray color dispersion comprising a pigment and a polymer binding agent dispersed in water; (b) discharging a wet concrete mix from a vessel; (c) spraying the first spray color dispersion onto the wet concrete mix discharging from the vessel to form a pattern of applied color in the wet concrete mix that binds with the wet concrete mix to form an irreversible integral structure with the pigment and the cement that is insoluble in water and remains as part of the concrete matrix; (d) conveying the wet concrete mix to a hopper feeding concrete forming equipment; and (e) forming a resultant structure of cured concrete.” No new matter has been added by this amendment. The amendment is supported in the specification at, for example, page 5, line 19 to page 6, line 5; page 8, lines 6-7; and page 14, lines 14-19.

Independent claim 11 has been amended to recite a step of “conveying the wet concrete mix to a hopper feeding concrete forming equipment.” No new matter has been added by this amendment. The amendment is supported in the specification at, for example, page 8, lines 6-7.

35 U.S.C. §103(a)

Each of the pending rejections under 35 U.S.C. §103(a) relies upon the ASA in view of the Bowe reference in asserting that the independent claims are rendered obvious. Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art to combine the cited references to arrive at the subject matter of the currently amended independent claims.

The pending Office Action relies upon the ASA, paragraph 7 of the Declaration filed on December 5, 2005 in particular, in asserting that “it was known in the art to produce multicolored concrete by discharging wet concrete mix from a vessel and spraying

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a first color dispersion onto the wet concrete discharging from the vessel to form a pattern of applied color and allowing the concrete to cure.” January 8, 2007 Office Action at p. 3. But the pending Office Action acknowledges that the “ASA fails to disclose mixing a pigment water dispersion and a polymer binding agent to form a spray color dispersion.” January 8, 2007 Office Action at p. 3. The result of the process described in paragraph 7 of the Declaration filed on December 5, 2005 was that “clumps of color would detach from the split surface of the concrete block when subjected to pressure wash.” Declaration of Inventors Under 37 C.F.R. §1.131, at paragraph 9.

Moreover, the process taught in Bowe differs significantly from the process of the currently amended claims, and that it would not have been obvious to one having ordinary skill in the art to modify the teachings of the Bowe reference in the manner suggested by the pending Office Action to arrive at the subject matter of the currently amended claims.

Independent claims 1 and 11 have each been amended to recite a step of “feeding the wet concrete mix to a hopper feeding concrete forming equipment” after the color is sprayed. The feeding and forming steps distribute the color into the thickness of the concrete, producing a pattern than can be revealed by splitting or breaking open the concrete.

As described in the specification of the present application, the present technology is related to coloring concrete “to simulate the variegation of various natural stones and marbles.” Specification at p. 1, lns. 11-14. In order to achieve the desired coloration, the pending independent claims recite that a spray color dispersion that is sprayed “onto the wet concrete mix discharging from the vessel to form a pattern of applied color in the wet concrete mix” that forms “an irreversible integral structure with the pigment and the cement that is insoluble in water and remains as part of the concrete matrix.” Claims 1 and 11 (emphasis added). The step of “feeding the wet concrete mix to a hopper feeding concrete forming equipment” serves to produce the desired color pattern within the concrete without the need for further mixing, such that the color does not detach from the split face of a concrete block

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made according to the methods recited in claims 1 and 11. See Specification at p. 8, ln. 9, and at p. 13, lns. 12-20.

In contrast, the Bowe reference is directed to forming a body of a mineral substrate such as green concrete prior to applying the surface coatings described therein, and then drying and curing said body and surface coatings. See Bowe at Col. 2, lns. 11-29. The purpose of the Bowe surface coatings is to provide a high gloss surface finish to the substrate, which may be a concrete roof, floor or wall tile. See Bowe at Col. 1, lns. 4-9. As described in examples III and IV of the Bowe reference, the surface coatings of Bowe are applied to tiles that are already formed even though they are not yet cured. The Bowe reference thus does not teach the application of a spray color dispersion prior to “conveying the wet concrete mix to a hopper feeding concrete forming equipment” as recited in independent claims 1 and 11 as currently amended. Further, the Bowe reference thus discloses a coating on the surface of a formed body, such as a roof tile, and does not disclose a “pattern of applied color in the wet concrete mix” that forms “an irreversible integral structure with the pigment and the cement that is insoluble in water and remains as part of the concrete matrix” as recited in independent claims 1 and 11. (Emphasis added.)

The Bowe reference further teaches the use of multiple coatings on the surface of the formed body, at least the first of which is exposed “to hot air or infrared, ultraviolet or microwave radiation for sufficient time for at least the surface of said coating remote from the substrate body to form a film of polymeric binder.” Bowe at Col. 2, lns. 20-23. The Bowe reference teaches that this step occurs prior to the drying and curing step. Modifying the Bowe reference such that the surface coatings taught therein would be used a spray color dispersions that “from the vessel to form a pattern of applied color in the wet concrete mix” that forms “an irreversible integral structure with the pigment and the cement that is insoluble in water and remains as part of the concrete matrix,” as recited in independent claims 1 and 11 (emphasis added), would prevent the step of forming a film of polymeric binder because the color would be within the concrete block rather than on its surface as taught in Bowe. Such a modification of the Bowe process would also negate the purpose of

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the Bowe teachings to provide a high gloss surface finish to a formed body. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP 2143.01(V).

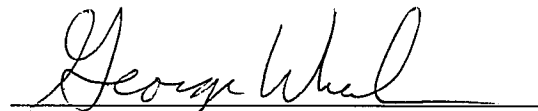
The Applicants respectfully submit that independent claims 1 and 11, as well as the dependent claims that depend therefrom, are not rendered obvious by the ASA in view of the Bowe reference. The remaining rejections are combinations of the ASA, the Bowe reference, and other references. These rejections are overcome in light of the discussion above establishing that the independent claims are not rendered obvious by the ASA in view of Bowe. The Applicants therefore request that the pending obviousness rejections relying upon a combination of the ASA and the Bowe reference should be withdrawn.

CONCLUSION

In view of the points mentioned above, the Applicants submit that the currently pending claims are in condition for allowance. The Applicants therefore request that the Examiner allow all of the pending claims.

Applicants believe that no fee is currently due with this Amendment and Response. However, the Commissioner is authorized to charge any necessary fees, or credit any overpayment, to the Deposit Account of McAndrews, Held & Malloy, Account No. 13-0017.

Respectfully submitted,



George Wheeler
Reg. No. 28,766
Attorney for Applicant(s)

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McANDREWS, HELD & MALLOY, LTD.
500 West Madison Street
34th Floor
Chicago, Illinois 60661
Telephone: (312) 775-8000